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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,056	12/31/2001	Amnon Silverstein	10010658	1798

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

RAHMJOO, MANUCHER

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/040,056	Applicant(s) SILVERSTEIN, AMNON	
	Examiner Mike Rahmjoo	Art Unit 2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 7/14/05.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 16-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

DETAILED ACTION

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16- 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Szelliski et al US Patent 6,009,190, hereinafter, Szeliski in view of Tice (US Patent 6,317,158).

As per claims 16 and 21 Szeliski teaches accessing said image (see for example column 9 lines 13- 15 for localizing results to sub- pixel precision corresponding to sub- pixels of an image), said image sampled at a higher spatial resolution than the spatial resolution of said display see for example figures 2- 7 column 13 lines 27- 31; based on intensity of said first color in said region of said image(the pseudocolor associated with each pixel inside), calculating an intensity value (matching the face color id tag of the triangle) for said first color to be displayed in said sub- pixel of said display, wherein said region comprises an intensity value for each of said plurality of colors see for example column 29 lines 54- 67 and column 20 lines 20-

43 wherein average color corresponding to a pixel location in a triangle along with color or intensity is used; and rendering said image on said display, based on said calculated intensities see for example column 27 lines 62- 67 and column 28 lines 1- 8 and column 32 lines 5- 9.

However, Szeliski does not teach mapping a plurality sub- pixels of said display to corresponding spatial regions of said image, wherein each sub- pixel of said display is mapped to a unique spatial region of said image.

Tice teaches mapping a plurality of sub- pixels (see for example column 5 lines 19- 22 and fig. 4) of said display to corresponding spatial regions of said image, wherein each sub- pixel of said display is mapped to a unique spatial region of said image see for example column 5 lines 10- 18 and fig. 4 wherein spatial mapping is defined by the effect definition:

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings of Tice into Szeliski to have subpixel position adjusted in association with spatial mapping and therefore avoid the undesirable artifacts that occur in detail areas that appear and disappear over time and thus improve the quality output being displayed see for example column 1 35- 40 through column 2 lines 1- 15 and 51- 65.

As per claim 17 Szeliski teaches averaging the intensity value of said first color over a plurality of regions neighboring said spatial region of said image, wherein each of said areas maps to its own plurality of spatial regions see for example column 30 lines 20- 21.

As per claim 18 Szeliski teaches based on the intensity of said first color in said spatial region of said image, calculating an uncompensated intensity value for said first color (computation of intensity through triangles with id tags) see for example column 29 lines 57- 67 and figure 31; and calculating an error for each of the rest of said plurality of colors within said region see for example column 11 lines 44- 56; and storing said errors (registration of errors) for said rest of said colors for processing further regions of said image see for example column 32 lines 43- 45; and calculating a compensated intensity value for said spatial region (compensation through de- ghosting; a method for improving quality of image mosaics see for example column 32 line 37), based on said uncompensated intensity value and errors which were calculated for said first color when processing other image regions see for example column 32 lines 54- 58.

As per claim 19 Szeliski teaches calculating said errors for said spatial region (see for example column 11 lines 44- 56) when processing a spatial region for which uncompensated values are calculated for other colors of said plurality see for example column 29 lines 57- 67 and figure 31.

As per claim 20 Szeliski teaches filtering said image prior to calculating the intensity value of said sub- pixel, thereby producing an image with the same color scheme as said display see for example column 29 lines 18- 20.

As per claim 22 Szeliski teaches based on the intensity of said first color in said plurality of spatial regions of said image, calculating an intensity value for said first color see for example column 29 lines 54- 67; and calculating an error for said first color see for example column 11 lines 44- 56; and propagating said error for said first color

for processing further spatial regions of said image see for example column 32 lines 40-42.

As per claim 23 Szeliski teaches using in the intensity value calculating an error that was propagated when processing another sub-pixel for said first color see for example column 12 lines 48- 50.

### ***Response to Arguments***

Applicant's arguments with respect to claims 16- 19 and 21- 22 have been considered but are moot in view of the new ground(s) of rejection.

As per applicant's remarks on pages 8- 9 applicant argues "having different limitations in newly presented claims is not a legally sufficient reason for a restriction requirement".

Examiner respectfully disagrees.

As per non- final rejection dated 04/14/2005, examiner pointed out to the clear and distinct differences within claim limitations which enable and require examiner to perform a search in different subclasses of class 345. Said limitations are not essentially in the subclasses as listed; however, they are close thereby enabling examiner to make said classifications.

Examiner would also point out that as per specification provided "spatial region" as claimed does not appear therein and the disclosure only recites "spatial resolution" which examiner views as being different to cited limitation.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**

### **Inquiry**

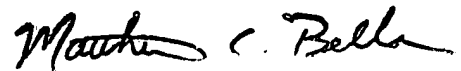
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is (571) 272-7789. The examiner can normally be reached on 6:30- 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272- 7778. The fax phone number for the organization where this application or proceeding is assigned is (571) 273- 8300 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Mike Rahmjoo

July 28, 2005



MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600